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Test Report on Cement

Project	Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Sri. D K Nagaraja, Bangalore.
Sample ID	Cement
Date of Sample Tested	23/02/2018
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	38 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	352 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	3mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	29.00%	25 % to 35

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

CIVIL XPERTS
ISO 9001:2015
CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.
Mobile : +91 97429 59595
Tele/Fax : 080-2632 2565
E-mail : civilexpertsltd@gmail.com
URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC/BBMP/QC/2017-18 Date: 18.02.2018

TEST RESULTS OF PHYSICAL PROPERTIES OF REINFORCEMENT STEEL

Client : **Bruhat Bangalore Mahanagar Palike**

Name of Work : Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.

Contractor : **Sri. D K Nagaraja, Bangalore.**

Sample Identification : 8mm, 12mm, 16mm TMT Bars

Technical Reference : IS 1786:2008, IS 1608:2005, IS 1599:1985 (Reaffirmed 2006)

Date of test : 18.02.2018

S.No	Brand	Nominal size (dia in mm)	Mass per metre (kg/metre)	TENSILE STRENGTH		
				0.20 % proof stress/ yield stress ($N/mm^{2)}$	Tensile strength ($N/mm^{2)}$	Elongation, percent on gauge length
1	Fe 500	8	0.400	512	554	20
2	Fe 500	12	0.619	556	576	18
3	Fe 500	16	1.590	578	593	19

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

For Civil Experts

Authorised Signature

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Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Sri. D K Nagaraja, Bangalore
Sample ID	Cement
Date of Sample	23/02/2018
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	38 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	336 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	3mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	29.00%	

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TEST REPORT	
Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri. D K Nagaraja, Bangalore.

SPECIFIC GRAVITY AND WATER ABSORPTION

FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Fine aggregate (River Sand/ M sand)	Proposed Use	concrete
Location/Source	At Site/Plant	Date of Sampling	23/02/2018
Period of Soaking	24 hours	Date of Testing	23/02/2018

Sl. No.	Test Property	TRIAL - 1	TRIAL - 2	TRIAL - 3	
A	Weight of sturated surface dry sample gm.	650	675	665	
B	Weight of oven - dry sample gm.	640	664	654	
C	Weight of Pycnometer Filled with water gm	1275	1275	1275	
D	Weight of Pycnometer + sample + water gm	1684	1702	1696	-
E	Bulk specific gravity $\frac{B}{(C+A-D)}$	2.656	2.677	2.680	**2.671**
G	Absorption (%) $\frac{(A-B)*100}{B}$	1.563	1.657	1.682	**1.634**

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike
Project	Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.
Consultants	Tejus Consultants, Bangalore
Contractor	Sri. D K Nagaraja, Bangalore.

SIEVE ANALYSIS

Total Weight:	**3000** gms				
Type of Material	**Fine aggregate (River Sand/ M**		**Proposed Use**	concrete	
Sample Location	At Site/Plant		**Date of Sampli**	23/02/2018	
			Date of Testing	23/02/2018	
IS Sieve Size	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing (Zone-II)**
10.00 mm	0	0	0	100.00	**100**
4.75 mm	211	211	7.03	92.97	**90 - 100**
2.36 mm	308	519	17.30	82.70	**75 - 100**
1.18 mm	433	952	31.73	68.27	**55 - 90**
0.600 mm	488	1440	48.00	52.00	**35 -59**
0.300 mm	712	2152	71.73	28.27	**8-30**
0.150 mm	644	2796	93.20	6.80	**0 - 10**
Pan	204	3000			-

Remarks : Satisfactory / Not Satisfactory

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TEST REPORT	
Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri. D K Nagaraja, Bangalore.

SPECIFIC GRAVITY AND WATER ABSORPTION

FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Fine aggregate (River Sand/ M sand)	**Proposed Use**	concrete
Location/Source	At Site/Plant	**Date of Sampling**	23/02/2018
Period of Soaking	24 hours	**Date of Testing**	23/02/2018

Sl. No.	Test Property	TRIAL - 1	TRIAL - 2	TRIAL - 3	AVERAGE
A	Weight of sturated surface dry sample gm.	680	675	670	
B	Weight of oven - dry sample gm.	672	663	659	
C	Weight of Pycnometer Filled with water gm	1275	1275	1275	
D	Weight of Pycnometer + sample + water gm	1703	1700	1698	-
E	Bulk specific gravity $\frac{B}{(C+A-D)}$	2.667	2.652	2.668	**2.662**
G	Absorption (%) $\frac{(A-B)*100}{B}$	1.190	1.810	1.669	**1.557**

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike
Project	Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.
Consultants	Tejus Consultants, Bangalore
Contractor	Sri. D K Nagaraja, Bangalore.

SIEVE ANALYSIS

Total Weight:	**3000** gms				
Type of Material	**Fine aggregate (River Sand/ M**		**Proposed Use**	concrete	
Sample Location	At Site/Plant		**Date of Sampli**	23/02/2018	
			Date of Testing	23/02/2018	
IS Sieve Size	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing (Zone-II)**
10.00 mm	0	0	0	100.00	**100**
4.75 mm	208	208	6.93	93.07	**90 - 100**
2.36 mm	314	522	17.40	82.60	**75 - 100**
1.18 mm	422	944	31.47	68.53	**55 - 90**
0.600 mm	462	1406	46.87	53.13	**35 -59**
0.300 mm	724	2130	71.00	29.00	**8-30**
0.150 mm	644	2774	92.47	7.53	**0 - 10**
Pan	226	3000			**- -**

Remarks : Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike				
Project	Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.				
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	Sri. D K Nagaraja, Bangalore				
Total Weight:	10000 gms				

SIEVE ANALYSIS

Type of Material	20 mm down size		**Proposed Use**	PCC	
Sample Location	Plant/At site		**Date of Sampling**	23/02/2018	
			Date of Testing	23/02/2018	
IS Sieve Size	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing**
40.00 mm	0	0	0	100	100
20.00 mm	268	268	2.68	97.32	95 - 100
10.00 mm	4820	5088	50.88	49.12	25 - 55
4.75 mm	4268	9356	93.56	6.44	0 - 10
Pan	644	10000			

Remarks : Satisfactory / Not Satisfactory

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TEST REPORT		
Clients	Bruhat Bangalore Mahanagara Palike	
Project	Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.	
Consultants	TEJUS CONSULTANTS	
Contractor	Sri. D K Nagaraja, Bangalore.	
Total Weight:	10000	gms

SIEVE ANALYSIS

Type of Material	**12.5 mm down size**		**Proposed Use**	PCC	
Sample Location	At Site/Plant		**Date of Sampling**	23/02/2018	
			Date of Testing	23/02/2018	
IS Sieve Size (in mm)	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing**
20.0	**0**	**0**	**0**	**100**	**100**
12.5	**555**	**555**	**5.55**	**94.45**	**90-100**
10.0	**3240**	**3795**	**37.95**	**62.05**	**40-85**
4.75	**5682**	**9477**	**94.77**	**5.23**	**0-10**
Pan	**523**	**10000**			

Remarks :	Satisfactory / Not Satisfactory

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

560079.O: +91 80 23287532, tejusconsultants@gmail.com

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Test report on Compressive strength of concrete cubes

Project	Construction of Fencing to Swimming Pool at Allalasandra Lake premises in ward No. 04 Yelahanka New Town.
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Sri. D K Nagaraja, Bangalore.
Grade of concrete:	M20
Size of cube:	150x150x150 mm
Reference IS code:	IS:516-1959

Sl.No.	Date of Casting	Date of testing	Age of Test	Weight of Cube	Area of Cube	Failure load	Compressive strength	Avg. Compressive strength
				Kg	mm^2	KN	N/mm^2	N/mm^2
1	23/02/2018	02/03/18	7 days	8.165	22500	303	13.47	13.59
2	23/02/2018	02/03/18	7 days	8.180	22500	306	13.60	
3	23/02/2018	02/03/18	7 days	8.186	22500	308	13.69	

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore